END SEMESTER EXAMINATION MAY-2023

Course Name: - B.Tech **Semester:- II**

Paper Name: - Programming For Problem Solving **Paper Code:- TES-201**

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. **Max Marks-70**

समय– 3 घण्टे + 20 मिनट प्रति घंटे अतिरिक्त–दृष्टिबाधित एवं सह लेखक परीक्षार्थियों के लिए। अधिकतम अंक–70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries 3 mark. All questions are compulsory.
- Section B- Answer any 5 out of 6 given questions in maximum hundred (150) words. Each question carries 7 marks.
- Section C- Answer any 2 out of 3 given questions in maximum five hundred (500) words. Each question carries 10 marks.

निर्देश:

- प्रश्न पत्र में तीन खण्ड अ, ब, व स हैं। सभी खण्ड अनिवार्य हैं।
- खण्ड–अ में प्रत्येक प्रश्न तीन अंक का है। सभी प्रश्न अनिवार्य हैं।
- खण्ड–ब में छः प्रश्नों में से किन्हीं पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें। प्रत्येक प्रश्न सात अंक का है।
- खण्ड–स में तीन प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर अधिकतम (300) शब्दों में दें। प्रत्येक प्रश्न 10 अंक का है।

Section – A (खण्ड–अ)

Objective Questions(वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions. **5×3 =15**
निम्नलिखित सभी प्रश्न अनिवार्य हैं।

i) An assembler translates
   a) Machine code into assembly code
   b) Assembly code into machine code
   c) Processing time into manual time
   d) Routine into subroutine

ii) The ..... operator is true only when both the operands are true
   a) &&
   b) ||
   c) !
   d) ? :

iii) What is the output of this C code?

```
# include <stdio.h>
void main ()
{
  int i = 0;
  for (i = 0; i < 5;  i++)
    if (i < 4)
    {
      printf("Hello");
      break;
    }
}
```

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a) Hello is printed 5 times
b) Hello is printed 4 times
c) Hello
d) Hello is printed 3 times

iv) What will the value of variable a?

int a = 25%10;

a) 2.5
b) 2
c) 5
d) Compiler error

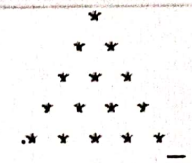
v) Which header file is essential for using strcmp() function?

a) strings.h
b) string,h
c) text,h
d) strcmp.h

Section – B (खण्ड–ब)
Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions in maximum 150 words. **5×7=35**
निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें।

i. What is digital computer? Draw block diagram of digital computer and explain each component.
ii. Differentiate between call by value and call by reference with proper example.
iii. Explain Logical, Unary and bitwise operator in detail
iv. Define flowchart and draw a flowchart to find largest among three numbers.
v. Write a program in C to print the following pattern



vi. Explain different type of control statements used in c programming with example.
vii. Write the advantage of using array. Write the program for matrix multiplication of two matrix elements.

Section – C (खण्ड–स)
Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question in maximum 300 words. **2×10=20**
निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर अधिकतम 300 शब्दों में दें।

i) (a) Differentiate between complier, interpreter and assembler
(b) Differentiate between linker and loader

ii) (a) Explain the structure of C program
(b) What is meant by storage class of a variable? Describe all types of storage class with example

iii) (a) What do you mean by pointer? How pointer variable is initialized?
(b) What do you mean by Structure? How we define and declare a structure variable?

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